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In Cooperation with State, Federal and Other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JUNE 11, 1948
(Fourth Cotton Insect Survey Report for 1948)

Although hot, dry weather has helped to hold down boll weevil infestations in many areas the weevils are becoming numerous enough to demand attention on many farms. Reports of heavy infestations have been received, especially from Texas, Mississippi, and South Carolina. Much effort is being made to hold down the boll weevil populations in certain counties. In Wharton County, Texas 102 early-season dusted fields examined last week had an average of 2% punctured squares as compared with an average of 22% punctured squares in 28 untreated fields.

The cotton fleahopper is attracting much attention in Southern Texas. A heavy schedule of dusting for its control has been followed in Calhoun, San Patricio, Nueces, and other counties in Texas. In Calhoun County last week 27 dusted fields had an average of 2 fleahoppers per 100 terminals as compared with 41 in 3 undusted fields. In Wharton County, 133 fields had an average of 2 fleahoppers per 100 terminals as compared to 16 per 100 terminals in 33 undusted fields.

No cotton leafworms have been reported.

No shortages of insecticides for cotton insect control have been reported.

BOLL WEEVIL

TEXAS: Hot, dry weather aided in reducing boll weevil populations in most areas but weevil infestations continued higher in many undusted fields than at this time a year ago in central, south-central, coastal, and lower valley counties. The average infestation in 419 fields in 29 counties was 16% punctured squares as compared to 3% at this time a year ago. In 57 fields no boll weevil infestation was found; in 164 fields less than 10% of the squares were punctured; in 104 fields from 10 to 25%; in 70 fields from 25 to 50%; and in 24 fields more than 50% of the squares were punctured. Much dusting has been done for weevil control in these areas especially in fields where cotton fleahoppers were present in damaging numbers.

Weevils were found in 35 of the 49 fields where a total of 18,900 terminal buds were examined in McLennan and Falls Counties in the central portion of the State; and 110 boll weevils were found or at an average rate of 87 per acre. In 1947 during this period weevils were found at an average rate of 27 per acre. Square examinations in 26 fields of older cotton showed an average of 43% punctured squares, ranging from 6% to 87%. This high square infestation is partly due to scarcity of squares.

There was no weevil emergence in the hibernation cages at Waco during the week. A total of 11 weevils have emerged this season. The percent emergence at this date for this and previous years and total seasonal survival are shown as follows:

| <u>Year</u> | <u>Seasonal Survival as of June 10</u> | <u>Total Seasonal Survival, Percent</u> |
|-------------|--|---|
| 1940 | 0.14 | 0.2 |
| 1941 | 19.84 | 21.32 |
| 1942 | 0.715 | 0.715 |
| 1943 | 0.225 | 0.225 |
| 1944 | 2.74 | 2.78 |
| 1945 | 3.18 | 3.42 |
| 1946 | 1.30 | 1.32 |
| 1947 | 0.16 | 0.18 |
| 1948 | 0.22 | |

LOUISIANA: The average square infestation in 63 fields in 7 Parishes in south central Louisiana was 4%. No punctured squares were found in 31 of the fields examined and in 28 of the fields less than 10% of the squares were punctured. In Natchitoches Parish the weevil infestations are spotted, as no weevils were found in 10 fields and in 9 infested fields less than 10% of the squares were punctured, but 4 fields had more than 10% of the squares punctured, 2 of them with more than 25% punctured squares and 1 with more than 50% of the squares punctured.

Plant examinations made in 56 fields in Madison Parish in the northeastern section of the State showed an average of 103 weevils per acre as compared to 131 of the previous week. A summary of plant examinations and survival of weevils in hibernation cages at Tallulah are as follows:

| <u>June 7 to June 13</u> | | | | |
|--------------------------|--|--|---|---|
| <u>Year</u> | <u>Number of Plants Examined</u> | <u>Number of Weevils Found</u> | <u>Number of Weevils Per Acre</u> | <u>Boll Weevil Survival in Hibernation Cages from May 1 to June 4</u> |
| 1948 | 56,000 | 320 | 103 | .36 |
| 1947 | 56,000 | 832 | 267 | 1.40 |
| 1946 | 52,000 | 1,275 | 441 | 7.90 |
| 1945 | 56,600 | 680 | 219 | 10.28 |
| 1944 | 90,200 | 723 | 144 | 1.70 |
| 1943 | " | " | " | .82 |
| 1942 | 76,000 | 202 | 48 | .08 * |
| 1941 | 72,000 | 1,194 | 299 | 12.20 |
| 1940 | 78,000 | 201 | 46 | .02 * |
| 1939 | 59,000 | 439 | 134 | 1.92 |
| 1938 | 48,000 | 287 | 108 | .74 |
| 1937 | 50,000 | 164 | 59 | 12.92 |
| 1936 | " | " | " | .10 |
| 1935 | 36,000 | 337 | 168 | .48 * |
| 1934 | " | " | " | 3.90 |
| 1933 | " | " | " | .36 |
| 1932 | " | " | " | 9.14 |

* Emergence completed.

ARKANSAS: A total of 5700 cotton plants were examined in 19 fields in three counties in the southeastern section of the State and boll weevils were found at an average of 25 per acre as compared to 54 a year ago.

MISSISSIPPI: Dr. Clay Lyle, Entomologist of the Agricultural Experiment Station and State Plant Board, reported on June 14:

"Light to heavy infestations of boll weevils are present in nearly all sections of Mississippi except the Delta and extreme northern counties, according to observations made by State Plant Board inspectors and federal entomologists on 441 farms in 50 counties during the past week. Weevils were found on 116 farms, the average on 93 farms where cotton had not yet begun squaring being 89 per acre, the same as last week, which compares with 376 per acre on this date last year. On 23 farms with squares present, the infestation ranged from 1 to 52%, the average being 9%, as compared with 10% last year at this time."

In 17 Delta counties, 255 fields were examined during the week. In 10 fields weevils were found at an average rate of 90 per acre and in 9 fields, where plants were large enough to make square counts, the infestations ranged from 1% to 24% or an average of 8% for the infested fields. With the exception of 1 infested field in Grenada County, the Delta infestations were confined to the 5 south Delta counties, Warren, Yazoo, Sharkey, Issaquena and Holmes.

GEORGIA: Reports indicate that the early season boll weevil infestations in Georgia are lighter now than a year ago. Examinations of some fallen squares indicated approximately 90% mortality of boll weevil grubs in the squares due to the hot, dry weather of early June.

SOUTH CAROLINA: The emergence of boll weevils into an early planted trap plot of cotton near Florence continued at a fairly high rate. A total of 91 weevils were collected as compared to 89 the previous week. The emergence into the trap plot as compared with previous years through the second week of June is as follows:

| <u>Year</u> | <u>Weevils Collected</u> |
|-------------|--------------------------|
| 1948 | 335 |
| 1947 | 875 |
| 1946 | 172 |
| 1945 | 476 |
| 1944 | 126 |
| 1943 | 429 |
| 1942 | 510 |
| 1941 | 625 |
| 1940 | 34 |

All of the 74 fields examined in 14 counties were infested at an average rate of 17% punctured squares. In 15 fields less than 10% of the squares were punctured; in 48 fields from 10 to 25%; and in 11 fields in Florence, Barnwell, Richland, Calhoun, Orangeburg, Bamberg and Berkeley Counties from 26 to 50% of the squares were punctured.

COTTON FLEAHOPPER

TEXAS: The cotton fleahopper infestation increased from an average of 9 per 100 terminals last week to 14 this week. There has been a considerable increase in fleahopper infestations in many cotton fields throughout the southern portions of central Texas during the week. Many complaints of cotton

flea hopper damage have been received and cotton growers are beginning to dust for flea hopper control in this area. The field inspection records made during the week as compared to records made during the second week of June in 1947 and 1946 are as follows:

| | | | | | | | | | | | | | |
|------|---|--------|---------|----|---------|------|-----|-----|--------|-------|-----|----|------|
| 1948 | - | 21,300 | plants, | 50 | fields, | 14.1 | per | 100 | term., | range | 1.3 | to | 62.0 |
| 1947 | - | 20,200 | " | 40 | " | 5.0 | " | " | " | " | 0 | to | 24.0 |
| 1946 | - | 18,900 | " | 49 | " | 0.4 | " | " | " | " | 0 | to | 4.3 |

No cotton fleahoppers emerged from hibernation cages at Waco during the week. The total emergence to date from the 16 cages under observation is 19,118. At this time in 1947 and 1946, totals of 10,241 and 8,473, respectively, had emerged. The last date of emergence was May 25, which indicates that emergence is over.

BOLLWORM

GEORGIA: Although the bollworm, Heliothis armigera (Hbn.) has not yet been reported on cotton in Georgia this season, this insect has been reported as unusually abundant this Spring on corn, tobacco and peanuts. Growers should be on the constant lookout for the bollworm in cotton fields.

TEXAS: Light infestations of bollworms were reported in many cotton fields in the Lower Rio Grande Valley.

MISCELLANEOUS INSECTS

TEXAS: Serious thrips damage has been observed in some cotton fields. Many fields show stunting of plants and severe damage and some loss of plants in spots.

Grasshoppers continue to be a serious menace to farm crops and pasture lands in McLennan County and over large areas throughout central Texas. Much poisoning is being done for their control. A few cotton fields have been seriously damaged. Practically all foliage has been stripped and it is doubtful if many of these plants will recover.

LOUISIANA: In the May 28 report, tiger moth caterpillars Callarctia phyllira (Drury) were reported as having destroyed several acres of cotton in East Carroll Parish. Additional infestations of these hairy caterpillars have been reported in Richland and Morehouse Parishes.

Sweepings were made in 14 cotton fields in Madison Parish during the week and the number of tarnished plant bugs collected ranged from 9 to 65 per 100 sweeps or an average of 35, as compared to an average of 30 the previous week. Tarnished plant bug damage was noted in many fields.

MISSISSIPPI: Thrips continue to cause serious damage to young cotton over much of the Delta. Damage was sufficient in 112 fields to warrant reporting. Thrips-damaged plants frequently resemble those damaged by cotton fleahoppers, and the injury from the two insects is often confused.

Tarnished plant bugs were reported in 109 fields and were especially abundant in Washington, Warren, Sharkey, and Issaquena Counties.

TENNESSEE: Dr. S. Marcovitch, Entomologist, Agricultural Experiment Station, Knoxville, wrote on June 14 "We are having a bad outbreak of the tiger moth caterpillar, Callarctia phyllira, in Giles and Lincoln Counties of Tennessee.

Mr. Andes reports that he saw at least 50 acres of cotton being ruined by these hairy caterpillars, and probably several hundred acres are infested. They seem to be coming out of adjoining lespedeza fields."

INSECTS ON IRRIGATED COTTON OF THE SOUTHWEST

The cotton is still too small for satisfactory sweeping records in the El Paso Valley. The number of injurious species per 100 sweeps in 10 cotton fields ranged from 0 to 2. Specimens tentatively identified as the black cotton fleahopper Chlamydatus associatus (Uhl.) were collected from cotton and alfalfa. This species has not been previously reported from El Paso and Hudspeth Counties, Texas, although it has been reported in relatively large numbers in New Mexico.

Injurious Hemiptera populations on alfalfa continue lower than last year. Sweepings made in 10 fields average 56 as compared to 156 a year ago at this time.

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